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L23: Entry 2 of 2 File: USPT Jul 25, 1995

DOCUMENT-IDENTIFIER: US 5436837 A
TITLE: System for controlling a motor vehicle

Detailed Description Text (34):
In order to be able to carry out particularly informative monitoring, the following method is applied. If the amount of the safety-relevant function which is to be monitored by the monitoring device is considered, the function sequence in terms of time can be represented as a directed, cycle-free graph. An example of such a graph is shown in FIG. 5b. At the starting node S of the graph, the test value is fed into the monitoring device, at the target node Z, the result is to be delivered to the monitoring device.

Detailed Description Text (35):
Each node has a number of edges which lead to it, each of these edges yielding an input value. The node calculates the output value on the basis of the input values, pursuant to a function F1, F2, . . . F6, which is passed on to all nodes which can be reached directly. The target node also receives a number of inputs. If the function sequence is without errors, the target node delivers the result to the monitoring device. Parallel paths in the graph represent the parallel sequence of the program, and sequential paths represent the serial sequence of the program.

Detailed Description Text (36):
The calculation of the control values in the microprocessor also takes place pursuant to such a graph. The graph used for calculation of the control values has the same structure, i.e., it possesses the same nodes and edges with the same arrangement. The calculation of the result takes place pursuant to different functions. A test function is assigned to each function for calculating the control value; this function is processed during, before or after the control function. If the individual test functions F1, F2, . . . F6 are suitably selected, a failure of a partial function of the microprocessor can also be reliably recognized. In the monitoring device, calculation of the result also takes place with this graph and the test function. If the microprocessor is working correctly, these two results agree.

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4.38
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7.07

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L23: Entry 2 of 2 File: USPT Jul 25, 1995

US-PAT-NO: 5436837
DOCUMENT-IDENTIFIER: US 5436837 A

TITLE: System for controlling a motor vehicle

DATE-ISSUED: July 25, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gerstung; Ulrich	Vaihingen/Enz			DE
Hall; Dieter	Schwieberdingen			DE
Kirschner; Michael	Ludwigsburg			DE
Zimmerman; Werner	Stuttgart			DE
Berger; Joachim	Winterbach			DE
Grosser; Martin	Stuttgart			DE
Seher; Dieter	Ilsfeld			DE
Wessel; Wolf	Oberriexingen			DE
Bittinger; Wolfgang	Wien			AT
Dittrich; Wolfgang	Wien			AT
Forster; Felix	Wien			AT
Poledna; Stefan	Wien			AT
Schmidt; Karl-Heinz	Oberwart			AT

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Robert Bosch GmbH				DE	03

APPL-NO: 07/843011 [PALM]
DATE FILED: February 28, 1992

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DE	41 14 999.8	May 8, 1991

INT-CL-ISSUED: [06] G06 F 11/30

US-CL-ISSUED: 364/424.03; 340/438, 371/25.1, 371/68.1
US-CL-CURRENT: 701/29; 340/438, 714/736, 714/820

FIELD-OF-CLASSIFICATION-SEARCH: 364/424.03, 364/424.04, 364/431.01, 364/431.11, 364/550, 364/551.01, 73/117.2, 73/117.3, 340/438, 340/439, 371/25.1, 371/26, 371/68.1

See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL | Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4532594	July 1985	Hosaka et al.	364/431.11
☐	4583176	April 1986	Yamato et al.	364/431.11
☐	4615321	October 1986	Haefner et al.	340/438
☐	4797828	January 1989	Suzuki et al.	364/431.11
☐	4881227	November 1989	Buhren	364/431.11
☐	4928242	May 1990	Suzuki	364/424.03
☐	5142474	August 1992	Miyata et al.	364/431.11
☐	5153835	October 1992	Hashimoto et al.	364/431.11
☐	5235527	August 1993	Ogawa et al.	364/431.11
☐	5274554	December 1993	Takats et al.	364/424.03

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FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	CLASS
0127789A3	December 1984	EP	
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0322141A2	June 1989	EP	
3240707	May 1984	DE	
3531198	March 1987	DE	
2026705	February 1980	GB	
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Steffen Storandt et al.; "Sichere und Fehlertolerante Mikrocontroller-Systeme," Electronik, vol. 38, No. 10, May 12, 1989, Munchen, Germany, pp. 88-90; p. 89, column 1, line 15-line 25.

ART-UNIT: 234

PRIMARY-EXAMINER: Chin; Gary

ATTY-AGENT-FIRM: Kenyon & Kenyon

ABSTRACT:

A system for controlling a motor vehicle includes a first device for determining control data required for controlling the motor vehicle. A second device monitors the first device. The first device determines second data on the basis of first data, pursuant to a test function. The second device determines third data on the basis of the first data, pursuant to the same test function. The first and/or the second device recognizes an error state relevant to safety, dependent upon a comparison between the second data and the third data.

17 Claims, 14 Drawing figures

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L23: Entry 1 of 2 File: USPT Nov 28, 2000

US-PAT-NO: 6154736
DOCUMENT-IDENTIFIER: US 6154736 A

TITLE: Belief networks with decision graphs

DATE-ISSUED: November 28, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chickering; David Maxwell	Redmond	WA		
Heckerman; David	Bellevue	WA		
Meek; Christopher A.	Kirkland	WA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Microsoft Corporation	Redmond	WA			02

APPL-NO: 08/902759 [PALM]
DATE FILED: July 30, 1997

INT-CL-ISSUED: [07] G06 N 5/00, G06 N 5/02

US-CL-ISSUED: 706/59; 706/45
US-CL-CURRENT: 706/59; 706/45

FIELD-OF-CLASSIFICATION-SEARCH: 706/12, 706/46, 706/59, 706/61, 706/45
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected Search ALL Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5696884	December 1997	Heckerman et al.	706/61
☐	5704017	December 1997	Heckerman et al.	706/12
☐	5704018	December 1997	Heckerman et al.	395/75
☐	5715374	February 1998	Heckerman et al.	706/46
☐	5802256	September 1998	Heckerman et al.	706/59

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Chickering, David Maxwell et al., "A Bayesian Approach to Learning Bayesian Networks with Local Structure," Technical Report MSR-TR-97-06, Microsoft Research, Redmond, Washington, Mar. 1997, pp. 1-22.
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Breese, J.S.; Heckerman, D., Decision-theoretic case-based reasoning, Systems, Man and Cybernetics, Part A, IEEE Transactions on, vol.: 26 6 , Nov. 1996 , pp.: 838-842.

Heckerman, D.; Breese, J.S., Causal independence for probability assessment and inference using Bayesian networks, Systems, Man and Cybernetics, Part A, IEEE Transactions on, vol.: 26 6 , Nov. 1996 , pp.: 838-842.

ART-UNIT: 272

PRIMARY-EXAMINER: Stamber; Eric W.

ASSISTANT-EXAMINER: Starks, Jr.; Wilbert L.

ATTY-AGENT-FIRM: Michaelson & Wallace Michaelson; Peter L.

ABSTRACT:

An improved belief network is provided for assisting users in making decisions. The improved belief network utilizes a decision graph in each of its nodes to store the probabilities for that node. A decision graph is a much more flexible and efficient data structure for storing probabilities than either a tree or a table, because a decision graph can reflect any equivalence relationships between the probabilities and because leaf nodes having equivalent probabilities need not be duplicated. Additionally, by being able to reflect an equivalency relationship, multiple paths (or combinations of the parent values) refer to the same probability, which yields a more accurate probability.

41 Claims, 19 Drawing figures

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10/795,768 Dialog Classic search

```
S (VEHICLE OR CAR OR AUTOMOBILE) AND GRAPH? AND NODE AND GRIDLINE?

Your SELECT statement is:
   S (VEHICLE OR CAR OR AUTOMOBILE) AND GRAPH? AND NODE AND GRIDLINE?

          Items   File
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1. No files have one or more items; file list includes 10 files.

```
S  GRAPH? (S) NODE (S) GRIDLINE?

Your SELECT statement is:
   S  GRAPH? (S) NODE (S) GRIDLINE?

          Items   File
          -----   ----

   No files have one or more items; file list includes 10 files.

?
S  GRAPH? (S) NODE (S) GRID?

Your SELECT statement is:
   S  GRAPH? (S) NODE (S) GRID?

          Items   File
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             17     6: NTIS_1964-2006/Jul W3
             54     8: Ei Compendex(R)_1970-2006/Jul W3
              2    63: Transport Res(TRIS)_1970-2006/Jun
              7    94: JICST-EPlus_1985-2006/Apr W4
              6    95: TEME-Technology & Management_1989-2006/Jul W4
              2   266: FEDRIP_2005/Dec
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2. 6 files have one or more items; file list includes 10 files

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B 6,8,63,94,95,266
       27jul06 20:33:04 User264717 Session D472.7
            $1.32    0.499 DialUnits File411
     $1.32  Estimated cost File411
     $1.86  INTERNET
     $3.18  Estimated cost this search
    $53.72  Estimated total session cost   1.806 DialUnits

SYSTEM:OS  - DIALOG OneSearch
  File   6:NTIS 1964-2006/Jul W3
         (c) 2006 NTIS, Intl Cpyrght All Rights Res
  File   8:Ei Compendex(R) 1970-2006/Jul W3
         (c) 2006 Elsevier Eng.  Info. Inc.
  File  63:Transport Res(TRIS) 1970-2006/Jun
         (c) fmt only 2006 Dialog
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File 94:JICST-EPlus 1985-2006/Apr W4
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File 95:TEME-Technology & Management 1989-2006/Jul W4
(c) 2006 FIZ TECHNIK
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S S1 AND (VEHICLE OR CAR OR AUTOMOBILE)
88 S1
292192 VEHICLE
96696 CAR
143767 AUTOMOBILE
S2 0 S1 AND (VEHICLE OR CAR OR AUTOMOBILE)